The MIGHTY EIGHTH VOICE

News from around 8th Air Force

Vol IV Issue 7 | Barksdale Air Force Base, Louisiana | August 2004

B-2 mission accomplished

By 2nd Lt. Mary Olsen
509th Bomb Wing Public Affairs

WHITEMAN AIR FORCE BASE, MO (ACCNS) — Whiteman members returned July 20 from Coronet Bugle 49, a global reach exercise at Andersen Air Force Base, Guam.

The exercise required 509th Bomb Wing members to deploy to Andersen and support several long duration sorties. During the weeklong training, B-2s departed from Whiteman, landed at Andersen, the aircrew changed and the B-2s continued long duration sorties back to Whiteman. Crews flew 20-hour missions and B-2 engines ran for over 40 hours while the aircraft spent minimal time on the ground.

Global reach exercises like CB 49 are important for members to demonstrate their ability to perform outside the U.S.

"It is vital to deploy and operate from our forward operating locations," said Lt. Col. Paul Tibbets, 325th Bomb Squadron Director of Operations and deployment commander. "Understanding and resolving issues ranging from infrastructure to equipment will greatly aid our ability to respond when called."

A B-2 Bomber taxis onto the flightline at Andersen Air Force Base, Guam in support of Exercise Coronet Bugle 49. Two B-2s deployed to Andersen from Whiteman as part of an Air Combat Command Global Power mission. The missions allow aircrews to train for the long flights from stateside locations to overseas theatres. (Photo by Staff Sergeant Tia Schroeder)

As Andersen increases its support for Whiteman and the B-2, Colonel Tibbets said it's critical that we think about longer global reach training missions.

"With our limited assets and requirements to support combat mission ready aircrew training, formal training, weapons school and the operational test community, many challenges lie ahead for balancing these areas with a deployment," he said. "Planning is the key."

Members reflected on valuable lessons learned while performing their duties at Andersen.

Capt. Rob Southerland, 393rd Bomb Squadron, said this experience educated him on what it takes to operate the B-2 away from Whiteman.

"Exercises like these get you outside the states and operating the B-2 somewhere you're not as familiar with," he said.

Members also learned the importance of teamwork while operating from a forward location.

Staff Sgt. Tia Schroeder, 509th Communications Squadron, said it's a unique experience to interact so closely with individuals from various specialties and see how each

● See B-2, page 5

Stickers, terrorists alike in numerous ways

By Lt. Col. Gary Bell
524th Fighter Squadron Commander

"*War is an ugly thing, but not the ugliest of things. The decayed and degraded state of moral and patriotic feeling which thinks that nothing is worth war is much worse*," John Stuart Mill.

The Latin name is cenchrus. The common name is sandbur.

I grew up in Oklahoma and we called them stickers, some call them burrs. They are those little spiky nuisances hiding in the grass.

Everybody who has sons or dogs hates stickers. My sons don't wrestle in the grass or play football anymore and my dogs only walk on sidewalks.

Stickers take the nutrients in the soil and give nothing back but stickers. Cows don't eat them, birds don't eat them. You can't make bread out of their seeds.

They find new places to grow by getting stuck in a boy's foot, or tangled up in dog hair. Because they don't work to produce anything worthwhile, they grow faster than good grasses and more easily choke them out.

They contribute nothing to the world but chaos, pain and misery.

Their root system is a stringy network designed to soak up minerals and water.

They grow low and spread out to ensure they have the room they need to kill the weaker grasses whose habitat they have invaded.

If you pull them up, their roots fracture, leaving behind tendrils waiting to pop up again.

I have seen them imbedded in clover, hiding behind the green leaves, protected from pulling and spraying, ready to stick you when you try to pull them up.

They grow in great clumps even as they choke out each other.

Perhaps the most amazing thing about stickers is that some folks prefer them to bare ground, or the work it takes to eradicate them.

Where stickers are, there is no growth, no productivity, no good thing.

In spite of all that, they are weak plants.

They must have hot, dry, sandy soils that other plants have trouble with.

If a yard has a healthy stand of good grass and is maintained well with water and cutting, stickers will die out.

They have to have an environment that is harsh and ugly to survive and they will do their best to keep things harsh and ugly.

I hate stickers.

The terrorists that make their daily appearances on the news are of the same ilk. They are the stickers of the human race.

Terrorists contribute nothing to the society they invade.

They take security and prosperity and turn it into oppression and poverty.

They take the fruit of the land and the initiative of the people and hoard treasure even as their countrymen starve.

Their only contribution to society is fear and hopelessness.

They are unable to truly lead because they must continually hide. Hide what they do, who they are, hide out of fear for their own comforts, hide from their own cutthroat nature.

Each day is an exercise in lies and deceit in an attempt to cling desperately to the power and control that is their only sustenance.

The most amazing thing is that some people prefer them to… well, anything at all.

Some people have the audacity to validate terrorist brutality by the mistaken assumption that every creed is valid and every culture is as good as the next.

Their culture of fear, oppression and arrogance is infinitely inferior to our culture of hope, freedom and respect.

In all this, terrorists are weaklings. Like playground bullies, they prey on the weak and fear the strong.

They closely control the environment and keep it harsh and ugly, knowing that given reason to hope, the people will rise up and destroy them.

Unable to compete against honesty, integrity and altruism, they hide behind masks and commit brutalities while bragging of their honor.

I hate terrorists.

The "Mighty Eighth" Voice

Editorial content of The **Mighty Eighth Voice** is edited, prepared and provided by the 8th Air Force Public Affairs office, Barksdale Air Force Base, Louisiana. All photographs are official Air Force photographs unless otherwise indicated.The contents of The **Mighty Eighth Voice** are not necessarily the official views of, or endorsed by, the U.S.Government, the Department of Defense or the Air Force. The Mighty Eighth Voice is a monthly publication. People may submit suggestions for stories by calling TSgt. Jeff Loftin in the Public Affairs Office room 150, or call (318) 456-2892 or DSN 781-2892.

Eighth Air Force Commander
Lt. Gen. Bruce Carlson

Chief, Public Affairs
1st Lt. Carla Pampe
carla.pampe@barksdale.af.mil

Editor
Tech. Sgt. Jeff Loftin
NCOIC, Public Affairs
jeffery.loftin@barksdale.af.mil

Sweep team removes hazards from ranges

By 1st Lt. Mike Chillstrom
Gunfighter public affairs

MOUNTAIN HOME AFB, Idaho — Nearly 40 Airmen participated in one of Mountain Home Air Force Base's largest annual operations – removing potentially hazardous ordnance from 130,000 acres of base training ranges.

The monthlong undertaking, which clears both the Saylor Creek and Juniper Butte Ranges, is a joint venture. Twenty personnel from the 366th Civil Engineer Squadron's Explosive Ordnance Disposal Flight, two from the 366th Civil Engineering Squadron, five from the 266th Range Squadron and 12 EOD specialists here on temporary duty specifically for this mission are working side-by-side.

A convoy of dump trucks, all-terrain vehicles and two-and-a-half ton trucks lines up every morning and thoroughly combs the ranges for 25-pound, 500-pound and other practice dummy bombs. Helicopters are also used to locate munitions that may have skidded outside the range boundaries.

The 366th CES operates dump trucks and front-end loaders to help transport the bulky quarter-ton dummy bombs.

Target areas are the most heavily littered areas, but all 120,000 acres of the Saylor Creek Range and more than one-third of Juniper Butte's 26,000 acres will be cleared.

"Clearing the ranges is such a big operation," said Staff Sgt. Gregg Wozniak, NCO in charge of EOD mobility equipment. "People may hear Saylor Creek or Juniper Butte but not truly know or understand what goes on out there."

Roughly 3,500 of the 25-pound bombs and 350 of the 500-pound bombs have been cleared, or well over 100 tons.

The 25-pounders, called BDU 33s, emit a cloud of smoke upon impact, so pilots can visualize whether their payload hit its target.

Exploded ordnance are removed from the ranges and sold for scrap.

If EOD cannot tell if the smoke cartridge has been expended, they will place a small probe in a BDU 33 to determine its status. All unexploded ordnance and duds are then detonated with TNT at a demolition site.

Above, a pile of 500-pound bombs, called BDU50s, are lined up on the Saylor Creek Range during a monthlong effort to clear all dummy ordinance from Mountain Home Air Force Base's ranges. Roughly 3,500 BDU 33s, which are 25-pound bombs, and 350 BDU 50s will be cleared. The 120,000-acre range and more than one-third of the Juniper Butte Range's 26,000 acres will be cleared. Left, an explosive ordinance disposal specialist removes a practice bomb from the Saylor Creek Range. (Photos by 1st Lt. Mike Chillstrom)

Range clearing allows a window for range keepers to update and maintain the area while there is no ordnance on the targets.

"We're making the ranges better for the day-to-day operations and training," Staff Sgt. Wozniak said. "In terms of the big picture, it allows the guys to train and do their job to put bombs on targets overseas. People see and hear the planes take off every day, but they may not realize how big of a part that plays in the overall Air Force mission."

The ranges are not only used by Gunfighter units, but also by other military units in the Northwest United States.

Ellsworth continues with B-1 upgrades

By Airman 1st Class Jason Piatek
Black Hills Bandit staff

ELLSWORTH AIR FORCE BASE, S.D. (AFPN) – The latest upgrade designed to make the B-1 an even more effective flying force has reached Ellsworth. The Ellsworth Block E-1 upgrades, which began July 2003, have been completed on two aircraft thus far. The base's B-1 fleet should be modified by July 2005.

The upgrade has improved the jet's computer system, radar abilities and weapon flexibility, said Capt. Archange Chavannes, 28th Operations Support Squadron chief of wing scheduling.

"The changes give (crews) much more situational awareness, as well as a more diverse combat capability," said the captain.

Captain Chavannes said the improvements of the B-1's capabilities were necessary to maintain its status as one of the most effective weapons.

The increased munition capability allows the jet to carry a variety of mixed weapons loads, which increases its target options. And increasing the jet's ability to attack different targets has never been more useful than today, said the captain.

"The greatest innovation in warfare is the amount of information we've been able to receive through different sensors such as satellites, ground troops, the predator or other airborne platforms such as the Joint Surveillance Target Attack Radar System," he said. "The air operations center gets a ton of information in every day, and it starts getting to the point where targets are getting struck before confirmation is received that the previous day's targets have been eliminated."

Captain Chavannes said with the influx of information, a B-1's target can often change after it's taken off.

Jeff Mager, Boeing Corp. contractor, instructs Maj. Robert Liebman, 34th Bomb Squadron weapon systems officer, on some B-1 avionics enhancements displayed on the Crew Familiarization Module. The CFM, the first of six PC-based systems to be acquired by Ellsworth Air Force Base, S.D., will be used to train crews on upcoming upgrades, to include Joint Air to Surface Standoff Missile and Joint Standoff Weapon employment capabilities. (Photo by Airman 1st Class Jason Piatek)

"The B-1 is never based too close to the fight, so there's usually three-to-four hours before we reach the target area," he said. "The volume of intelligence collected in those hours can be overwhelming and will change the status of and add new targets."

That's why Captain Chavannes said it's so important for the B-1 to have the ability to hit any target at any time. "It gives the air component commander much more flexibility, because he can load the jet almost any way he wants, and we're going to be able to strike anything he wants."

"During Operation Enduring Freedom, there were times when we'd be tasked against a target we knew we'd already struck. If it was a high-priority target and the operations center hadn't received the information back on whether or not we destroyed it, we'd be sent out to it again. Although, if they'd ask one of the crew members, we could've told them, 'we're a B-1, we destroy all our targets,'" said Captain Chavannes.

Another upgrade is the increase in the radar ability, which is mostly necessary to help locate the tankers for mid-air refueling, but is also useful as a defense mechanism, said the captain.

"We now have basically a watered-down version of what fighter pilots have as far as searching out enemy aircraft. Instead of just looking straight ahead, the radar now scans and can tell us more about the direction, airspeed and altitude of the aircraft. This makes it easier for us to escape an enemy fighter if we're engaged."

The upgrades also improved the availability of information on the Launch Acceptability Region, said Captain Chavannes.

"The LAR is basically the footprint

● See UPGRADE, page 5

● B-2, from page 1

role contributes to the mission.

"This exercise enabled us to work together as one cohesive team as opposed to being isolated within our squadrons," she said.

While at Andersen, members had the opportunity to work with people they usually don't interact with.

"I got to work with security forces, which I don't get to do very often," said Tech. Sgt. Dave Giese, 509th Maintenance Squadron.

Staff Sgt. Scott Ludrick, 509th Security Forces, said this interaction will aide in future deployments.

"It helps develop relationships to work smoothly with other squadrons, which will help in the future," he said.

> *"It is vital to deploy and operate from our forward operating locations."*
>
> *Lt. Col. Paul Tibbets*
> 325th Bomb Squadron director of operations

Senior Amn. Anthony Alexander, 509th Aircraft Maintenance Squadron, said he was pleased by the teamwork displayed during the exercise.

"It helps boost morale to work with others;" he said, "to know that you can rely on people even though you don't really know them."

From the pilots, maintainers, enlisted and officer personnel, Colonel Tibbets agreed that teamwork is instrumental in mission accomplishment.

"It takes the entire team to be successful," he said. "The perfect example of this was the last launch from Guam. Ops and maintenance worked together to overcome several challenging issues and launch three aircraft which successfully flew their missions back home."

● UPGRADE, from page 4

in the sky where a weapon can be launched and maneuvered to its target. Previously we just kind of pointed the jet in the right direction, and it would perform all of its calculations, but wouldn't show us what it was thinking. Now we can see the location of the area of sky we need to fly into, so we don't necessarily need to point right at the target."

Captain Chavannes said this ability is useful if a threat is off to one side of the LAR; that target can be eliminated while maneuvering around the threat and more dislocated targets can also be hit.

"So in one pass we can hit what may have taken two or three passes before," he said.

Due to the speed of the upgrade implementation, Block E-1 jets have already been a part of the fleet at Dyess AFB, Texas, for eight months.

Each conversion takes 18 working days, although they're trying to cut that timeline to 14, said Lt. Col. David Nickels, 28 OSS, B-1 upgrade integration officer.

"We're also getting our crews trained at a good rate, which is tough because you start with one pilot and one weapon systems officer, and branch off to teach the rest," said Captain Chavannes.

The maintenance professionals have also undergone training to assimilate to the changes.

"Boeing officials conducted a week-long training symposium here for our avionics system maintainers familiarizing them with the new hardware upgrades, theory of operation, software reprogramming requirements and procedures and basic system maintenance instruction in a classroom environment," said Senior Master Sgt. Gerry Wade, 28th Aircraft Maintenance Squadron squadron production superintendent. "On-the-job training is now in progress as we bring Block E-1 assets on-line and provide aircrew training sorties."

"We're all pretty young in this particular airframe, but it doesn't take much to adjust to the new software, it's just going to be a matter of time to refine our skills on it," said Captain Chavannes.

A little patience and some growing pains are a small price to pay when it's to add to the effectiveness of the jet's capabilities, said the captain.

The current upgrades aren't the only way Boeing and the Air Force are working to increase the superiority of the B-1. "JJI, which is the Joint Standoff Weapon/Joint Air to Surface Standoff Missile integration, is the next software release," said Colonel Nickels. "It'll allow us to employ JSOW and JASSM and is expected to be fielded operationally within the next few months. Next spring, we'll get another software release, Block E-2, which will add even more capabilities to the B-1, including the capability to employ the GBU-38 (500 lb. Joint Direct Attack Munition)," said Colonel Nickels.

According to the existing schedule, the entire B-1 fleet should be fully modified with Block E-2 by October 2005.

"By improving an already stellar piece of equipment, these upgrades should solidify the B-1's place atop the ladder of air-superiority for many years to come," said Captain Chavannes.

B-52 mechanic's idea saves AF thousands

By Tech. Sgt. Sherri Savant
917th Wing Public Affairs

Tech. Sgt. (now 2nd Lt.) Terrell Eikner, a B-52 mechanic here, creeps through a crawlspace commonly known as the "wine cellar". Lieutenant Eikner recently saved the Air Force thousands of dollars with his idea to combat corrision on pilot tubes, shown below, by making them from a different material. (Photos by Tech. Sgt. Sherri Savant)

BARKSDALE AIR FORCE BASE, La. — Sweat drips down the brow of Tech. Sgt. Terrell Eikner, now 2nd Lt. Eikner, as he creeps through the crawlspace commonly known as the "wine cellar" in the B-52 cockpit. The confined space, located directly behind the navigator/radar navigator instrument panel, houses a pitot tube used to measure air speed which needs to be replaced.

As Sergeant Eikner crawls through the tiny cavity, an idea pops into his head. This particular tube, he says, has to be changed much more often than four other similar tubes on the jet. He begins to question why…the answer would earn him about $10,000 and save the Air Force approximately $110,000 in parts and labor per year, according to Sergeant Eikner's calculations.

The main problem with the pilot and copilot pitot tubes, according to Sergeant Eikner, involves chipping, which reduces the accuracy of an airspeed indication. If the tube is chipped badly enough, it has to be replaced which takes two to four hours and costs approximately $2,000 per tube plus man hours.

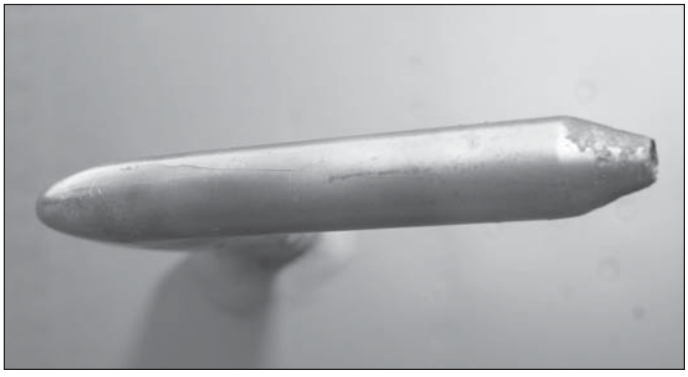
"It was after years of crawling into the wine cellar when temperatures were well over 100 degrees that I began to ask myself, Why do the other tubes on the aircraft last so much longer and require much less maintenance, and is there a design flaw which makes these tubes less reliable," Sergeant Eikner said.

He went right to work last August gathering information to find an answer. After speaking with Mr. Matt Anderson, a mechanical engineer with BF Goodrich, Sergeant Eikner's questions were answered, and his suspicions about the faulty pilot tube composition were confirmed.

Sergeant Eikner discovered that these particular tubes, located on either side of the nose of the aircraft, were made of a soft material known as cast beryllium copper, while the others were designed using nickel.

"Nickel is a much harder, denser material which will stand the test of time. My idea was to simply redesign the pilot and copilot tubes using nickel instead of copper." Sergeant Eikner said. "Not only will my idea save the Air Force money, but it will also reduce the amount of write-ups against the aircraft for pitot tube problems during phase inspections, which will keep those guys happy."

Final implementation of this modification is currently in the works and is expected later this year or in early 2005.



Makeover: *KC-135s to receive special 'nose jobs'*

By Maj. Rich Curry
507th Air Refueling Wing Public Affairs

TINKER AIR FORCE BASE, Okla. – Within the next three years, 495 C/KC-135 aircraft will receive nose jobs, but it's not about vanity. The new noses will last longer and save the Air Force nearly $30 million.

According to officials from the Oklahoma City Air Logistics Center's C/KC-135 Systems Program Office, the 45-year-old plus aircraft will receive NORDAM Weather Master compressed foam core units as organizational level maintenance specialists replace the radomes.

Air Force Reserve Command's 507th Air Refueling Wing here provided one of its KC-135R Stratotankers last fall to support the final test proof and verify the time-compliance technical order instructions. The Air Force Reserve has 58 KC-135R and 15 KC-135E aircraft assigned to nine air refueling wings. In addition, a Reserve air refueling group flies and maintains KC-135s with an active-duty wing.

The Air Force chose the new radome because of its high-impact resistance and resistance to moisture intrusion, said Ron Hopkins, C/KC-135 structural engineer. It's also 10 pounds lighter and easier to repair.

The new radome consists of a foam core sandwiched between inner and outer fiberglass plies. Mr. Hopkins estimates the meantime between failures for the new radome is projected at 17,241 hours versus 1,689 hours on the existing honeycomb.

Current honeycomb radomes are failing and being condemned at a high rate partly due to the radome layers separating, he said.

"Moisture was entering the edge of the older radome where it would freeze and expand at flying altitudes causing disjointing of the radome materials," Mr. Hopkins said.

The Air Force initially will issue the new radomes to customers as a TCTO modification kit. Most of the C/KC-135 currently being flown will receive these kits. KC-135D/E aircraft will not get the modification because they are pending retirement.

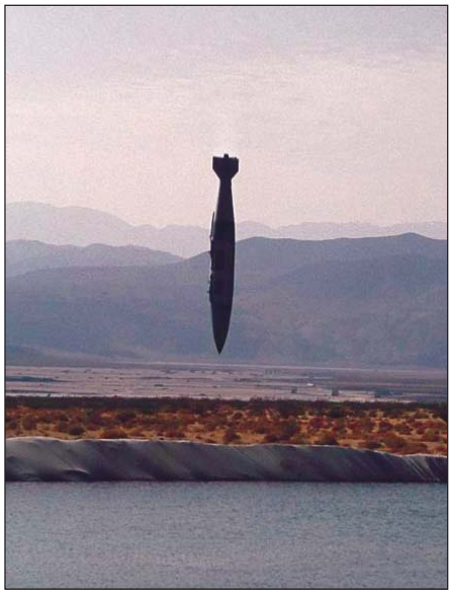
Senior Master Sgt. Robert Erickson, NCO in charge of the 507th Maintenance Group's quality assurance section, said it takes four hours to install the radome.

"It's great to know that our unit can help to improve the readiness of the entire fleet of KC-135s," said Sergeant Erickson.

Installing the new foam core radome is a reduction of total ownership cost initiative with a projected savings of $29.6 million during the life of the C/KC-135 weapon system.

Officials expect units will get TCTO, 1C-135-1616, sometime this spring and complete the radome replacements by early 2005.

Within the next three years, 495 C/KC-135 aircraft will receive nose jobs. The 45-year-old plus aircraft will receive NORDAM Weather Master compressed foam core units as organizational level maintenance specialists replace the radomes. The new noses will last longer and save the Air Force nearly $30 million.



Making the BUFF better

49th TES tests new projects

By J. Manny Guendulay
2nd Bomb Wing Public Affairs

BARKSDLE AIR FORCE BASE, La. – Nearly every squadron at Barksdale supports getting the bombers off the ground, whether it is the 2nd Logistics Readiness Squadron getting a part delivered on time, the 2nd Aircraft Maintenance Squadron unit that installs that part, or the 2nd Security Forces Squadron who guard the munitions and jets on the base. However, the 49th Test and Evaluation Squadron's role on base is to constantly improve the B-52 and keep it the Biggest, the Baddest and the Best.

Their mission

The 49th TES's mission is to plan, conduct and report operational test and evaluation of bomber aircraft and associated weapons.

Building a better BUFF

Many words can describe the B-52 Strato-fortress, but when keeping in mind its expanded lifespan in operation, durable definitely comes to mind. Since 1986, the 49th has been constantly working on projects involving improvements to the B-52 by either upgrading how the plane operates or expanding its functionality.

Currently, the 49th is working on three different projects: The Joint Assault Breaching System, the Litening Pod/GBU-28 project and the Avionics Architecture Risk Reduction project.

Crews spearheading these projects are passionate about their jobs and enjoy improving the B-52, such as Maj.

● *See BUFF, page 9*

Top, middle, and bottom, The 49th TES is currently working with the Navy on the JDAM Assault Breaching System, which uses tail-guided bombs with specially wired fuses to clear beachs of mines, sea urchins and other deployable obstacles. In the first picture the bomb is deployed and finding its target, the second picture shows how the bomb detonates on a horizontal plane. In picture three, the spent munition explodes horizontally wiping out nearby mines and other obstacles without leaving a crater. (Courtesy photos)

● *BUFF, from page 8*

Rick Westerfield, a B-52 veteran who now gets to help test new developments on the bomber he "grew up" flying.

"In the 23 years I've been flying the B-52, there has never been a more exciting time than today with the kinds of stuff we are doing on the airplane," the major said. "I absolutely love my job."

Squadron Structure

The squadron is broken into several different sections which cover all of the elements of the testing process. The 49th is comprised of different sections specializing in instrumentation, weapons, engineering and software engineering.

As Master Sgt. Richard Faviger, instrumentation lab flight chief puts it, instrumentation is gathering and reporting data, "much like a Star Trek probe."

The weapons section of the squadron works with munitions and oversees their delivery to the squadron and is responsible for placing them on the plane. The software engineers of the 49th TES directly support the squadron's projects by ensuring integration of computer software during different phases of the projects.

The flight ops section of the squadron is comprised of hand picked veterans of the airframe and are regarded as some of the most knowledgeable in the B-52 community. The individuals in the test operations section use their decades of experience to coordinate and execute tests at the appropriate range, secure funds for each mission and manage every aspect of each project.

Finally, the engineers of the program work with the squadron's pilots and administration. They look over the results of each program and then advise their commanders on what action is suggested.

The 49th Test and Evaluation Squadron's aircraft has received more than its fair share of odd looks since its recent tail marking paint job. Unlike the other BUFF's with either their LA, BD or MT lettering signifing either Barksdale Air Force Base, La., or Minot AFB, N.D., the 49th's plane reads OT which stands for Operational Test. But the tail markings of this plane isn't the only thing unique about it, and inside look would reveal the cutting edge of technology integrated into this plane. Projects such as the Avionic Architecture Risk Reduction are being tested. (Courtesy photos)

Staff Sgt. Frank Barone and Ratheon contractor Steve Labliner work on some equipment in the instrumentation section of the squadron. The instrumentation is used to act as a monitor for new equipment's performance aboard the testing flights performed by the squadron.

Above and below, The GBU-28 and the Litening Pod ER/AT are matched to widen the B-52's repertoire of munitions. The GBU-28 was traditionally an F-15E Strike Eagle's bomb; however, with the Litening Pod, the B-52H is able to release guided munitions with an accuracy that the Vietnam era B-52D could have never carried.

A chase car follows as a U-2 taxis in to its hangar. (Photo by Master Sgt. Shaun Withers)

'Country' side view of U-2

By 1st Lt. Kelley Jeter
380th AEW Public Affairs

"So, just what is this little jaunt for, anyway," I ask, as I settle down into the low-slung Camaro and prepare for a ride I've heard much about over the years.

"Country," a U-2 pilot and Tuscumbia, Alabama native looks at me with a crooked grin and slowly drawls: "for going fast."

As we pull out and drive toward the runway at this deployed location where we both work as Air Force officers, Maj. James G. Kimbrough, called "Country," explains the idea behind a chase car.

"The way the U-2 is designed, combined with the fact that the pilot is wearing a space suit, makes it impossible to tell just how close you are to the runway when you're landing."

Add to that a wingspan of over 100 feet and the fact that the U-2 lands on wheels in tandem like a bicycle, and it's easy to believe that this is one of the hardest aircraft in the world to take off and land.

Thus, the chase car. Cars with a surplus of power are assigned to each U-2 unit around the world, and upon takeoff and landing, another pilot drives the car on the runway just behind the plane and talks to the flier on a radio. His function is to coach him or her on the wheels' distance from the runway and other various factors that could affect safety.

The entourage trailing behind a U-2 on the runway is a ballet that no other aircraft must choreograph to do its mission. Besides the chase car that's talking to the pilot, a second chase car follows with yet another, very experienced U-2 pilot called the "air boss." This is a second set of experienced eyes whose function is to be a backup to the primary chase car, and help with anything he or she might have missed.

In addition to the two chase cars, a third vehicle follows and takes care of the wings. A wingspan of over 100 feet causes some unusual issues other planes don't have to deal with.

Mainly, droop.

Those wings are so long and heavy, that sitting on top of that two-wheel tandem frame can easily make the aircraft lean to either side, dragging the wings on the ground. Therefore, a "pogo," or a sort of prop stick with wheels on the end is attached to each wing after it lands, to support them as it taxis and sits on the ground.

The pogos fall off upon takeoff, and the same crew who attached them retrieves them from the runway after the plane is airborne.

"This is definitely a job for an adrenaline junkie," Kimbrough says, only half-kidding.

Growing up in Tuscumbia, he was always interested in the U-2 program, and majoring in history at Auburn only intensified that draw. He graduated college in 1989 and began pursuing his goal. Now a husband to Patricia, and father of two, 6-year-old daughter Aislinn and 8-year-old son JP, this four-year veteran of the U-2 is looking to eventually command a flying squadron.

And although the U-2's ground operation is something amazing to behold, the real action is at 70,000 feet.

Formerly a part of the CIA inventory, the U-2 is the most famous top-secret spy plane ever flown. When they were first introduced in 1955, it was the highest-flying aircraft in the world, and far out of the range of any ground-to-air missiles. This made it the perfect platform for reconnaissance, as they could fly anywhere and take pictures at will of anything on the ground their high-powered cameras could capture.

Altitudes of 70,000 feet, twice as high as most commercial airliners, creates unique challenges in environment that make it essential for pilots to wear space suits. The suit keeps fliers cool and pressurized for their dangerous, often nine-hour flights in that tiny cockpit. Flying on the edge of space is what this aircraft was designed to do, and it does it well.

"The U-2 was designed for extremely high altitudes and dances like a lady there," says Kimbrough. But "it's a dragon that has to be fought in the lower altitudes and for landing."

So why would anyone want to fly this beast?

Essentially, it's the challenge.

"It's about the difficulty and the unknowns that come up," he affirms. "I like being on the tip of the spear and having to deal with it myself. The U-2 is the most challenging aircraft in any inventory."